

**Iowa Department of Natural Resources
Environmental Protection Commission**

ITEM

16

DECISION

TOPIC

Contract- SFY 2007 DNR/UHL Air Quality Bureau Support Contract

The Commission will be asked to approve the attached interagency agreement between the Department and the University of Iowa Hygienic Lab (UHL). The agreement provides UHL support of Air Quality Bureau activities including ambient air monitoring, and asbestos sample analysis.

The agreement is for the period of July 1, 2006 through June 30, 2007. The agreement establishes variable payments, totaling \$1,812,910. This contract is funded by the air contaminant fund, \$967,171, federal grant, \$421,362, 103 federal grant, \$189,377, and livestock air monitoring fund, \$235,000. The agreement amount for last year was \$1,722,382. Increases in line items in this year's contract are associated with increased operation and maintenance, ion analysis, and staff costs.

Wayne Gieselman
Division Administrator
Environmental Services Division

Memo Date: May 30, 2006

AGREEMENT NUMBER: 2007-7230-07
IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL SERVICES DIVISION
AIR QUALITY BUREAU
WITH
THE UNIVERSITY OF IOWA

Agreement Title: 2007 UHL Services in Support of the DNR Air Quality Bureau

Agreement Amount: \$1,812,910

Time of Performance: July 1, 2006 - June 30, 2007

University Hygienic Laboratory
Project Officer:
Jeffrey A. Wasson

Iowa Department of Natural Resources
Project Officer:
Wayne Gieselmann

Submit Original Invoice and two copies to:

Mark Slatterly
Department of Natural Resources
Henry A. Wallace Building
Des Moines, IA 50319-0034
ATTN: Budget and Grants Bureau

Issue Payment to:

University of Iowa Federal Employer ID #4260048130
Business Office - Jessup Hall
Iowa City, IA 52242
ATTN: Mary Jane Beach

The University Hygienic Laboratory (UHL) agrees to deliver all supplies and perform all services set forth in the attached Special Conditions for the consideration stated herein. The rights and obligations of the parties to this agreement shall be subject to and governed by the Special Conditions and General Conditions. To the extent of any inconsistency between the Special Conditions or the General Conditions and any specifications or other contents which are made a part of this agreement, by reference or otherwise, the Special Conditions and the General Conditions shall control. To the extent of any inconsistency between the Special Conditions and the General Conditions, the Special Conditions shall control. This agreement contains 9 articles.

IN WITNESS THEREOF, the parties hereto have executed this agreement on the day and year last specified below.

UNIVERSITY OF IOWA

DEPT. OF NATURAL RESOURCES

By: _____
Brian Harvey,
Director of Sponsored Programs

By: _____
Elizabeth Christiansen,
Deputy Director

Date: _____

Date: _____

UNIVERSITY HYGIENIC LABORATORY

By: _____
Dr. Mary Gilchrist
Director

Date: _____

THIS AGREEMENT WAS APPROVED, AS REQUIRED BY SUBSECTION 455B.105(6) OF THE CODE OF IOWA, BY THE ENVIRONMENTAL PROTECTION COMMISSION ON _____, 2006.

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ARTICLE I - IDENTIFICATION OF PARTIES

This agreement is entered into by and between the Iowa Department of Natural Resources, Environmental Protection Division, Air Quality Bureau (hereinafter referred to as Department or DNR), and the University of Iowa (hereinafter referred to as UI or UHL).

ARTICLE II - STATEMENT OF PURPOSE

This agreement is entered into with the intent of aiding the Director of the Iowa Department of Natural Resources in controlling air pollution within the state of Iowa by maintaining an ambient air monitoring network.

ARTICLE III - STATEMENT OF WORK: AIR QUALITY ACTIVITIES

3.1. GENERAL PROVISIONS

DNR Contact Person. The Chief of the Air Quality Bureau shall serve as the Department's contact person in all provisions that refer to "the Department". All reporting, notifications, requests for approvals, etc., shall be made to the Chief of the Air Quality Bureau.

Overhead. Overhead will be charged at the rate of 8% for all items in this contract, with the exception of:

Items exceeding \$2000

Analytical costs for toxics or ions. Toxics analysis costs for the contract period shall be \$475 per TO-15 analysis and \$145 per TO-11A analysis.

3.2. AMBIENT AIR MONITORING

3.2.1. GENERAL

UHL Contact Person. Unless otherwise indicated, Jeff Wasson, Supervisor of the Air Monitoring Program shall serve as UHL's air quality contact person in all provisions for ambient air monitoring which refer to "UHL". Copies of all correspondence from Mr. Wasson to the Air Quality Bureau Chief shall also be sent to the DNR's air monitoring contact.

Ambient Air Monitoring Staff. UHL shall provide trained ambient air monitoring staff throughout the contract period at the indicated full-time equivalent (FTE) levels:

Position	FTE's
Field Operations	10.00
Data Management	3.50
Partisol Filter Lab	2.50
Supervisor	1.00
Quality Assurance	1.00
Clerical/Administrative Support	1.00
Programming/Computer Support	0.50
Electronics Support	0.50
Upper Management	0.15
Total	20.15

3.2.2. BILLING

Salaries. Salaries for ambient air monitoring staff are designated as variable costs under article IX of this contract. UHL shall submit a monthly billing for ambient air monitoring staff costs. The Department shall be billed only for the percentage of each employee's total monthly salary that corresponds to work done under this contract.

Monitoring Network Expenses. By the 30th day after the end of a calendar month, UHL will submit an itemized billing to DNR for all costs incurred during the month that are associated with the maintenance and operation of the monitoring network, including but not limited to monitor parts, van repairs, calibration gases, filters, etc. together with the monitor type, if applicable, to which it applies. At sites where brush or trees must be trimmed in order for the site to meet siting criteria, UHL will include costs for these services in its monthly bill.

Sampler Operator Costs. By the 30th day after the end of a calendar month, UHL will forward to DNR a list containing the payments due to local sampling personnel for samples collected during the month, the date each sample was taken, and the identification number of the monitor from which each sample was taken.

Monitor Installation Costs. By the 30th day after the end of a calendar month, UHL will submit an itemized billing to DNR for any monitor installation costs incurred by UHL during the month, together with the monitor site number to which it applies.

3.2.3. QUALITY ASSURANCE

3.2.3.1. Internal Quality Assurance Activities (Within UHL's Reporting Organization)

Quality System. UHL shall develop and implement a Quality System in accordance with EPA guidance in order to assure the quality of its air monitoring activities. The Quality System developed by UHL shall be completely autonomous from that of the DNR in the sense that the responsibility for developing procedures and oversight sufficient to demonstrate that the environmental data generated by UHL meets the requirements of EPA and/or the DNR rests solely with UHL. This will include development and implementation of a Quality Management Plan (QMP) according to EPA guidance document QA/R-2, development and implementation of Quality Assurance Project Plans (QAPP's) consistent with EPA guidance document QA/R-5, and development and implementation of Standard Operating Procedures (SOP's) for operation of air monitoring equipment, data handling, laboratory analyses, and other repetitive procedures. The QAPP/SOP shall be modified as necessary to remain current with EPA requirements outlined in 40 CFR Part 58, the current edition of EPA's Quality Assurance Handbook for Air Pollution Measurement Systems ("the Redbook"), and applicable EPA guidance. UHL shall designate members of its Air Monitoring Staff as QAPP/SOP reviewers. A complete set of QMP/QAPP's/SOP's for all air monitoring activities shall be submitted to the Department and EPA in hard copy and in PDF format as a component of the annual review of air monitoring activities.

Revision of Quality Assurance Documents. Substantive revisions of UHL's QMP/QAPP's/SOP's require approval of the Department and EPA. Electronic copies of all proposed revisions to quality assurance documents shall be provided to the Department at least fifteen (15) days prior to implementation, unless this review period is waived by the Department. QAPP/SOP revisions shall be submitted to EPA/DNR within forty (40) working days following (1) promulgation of new monitoring rules or procedures by EPA, (2) written notification of a deficiency in procedures by EPA/DNR,

or, (3) receipt of new equipment for which no QAPP/SOP exists. UHL shall not deploy monitoring equipment without an associated QAPP/SOP.

EPA Audit programs. UHL shall participate in EPA's National Performance Audit Program (NPAP), the performance evaluation program (PEP) for PM_{2.5} monitoring, and EPA technical systems audits (TSA's) as requested by the department. UHL shall fund at least one annual NPAP audit for all monitors for which NPAP audit devices are available. UHL shall conduct additional audits including but not limited to performance audits, systems audits, and review of quality assurance documents QMPs, QAPPs or SOPs at the request of the DNR.

Annual Network/Quality Assurance Review. On an annual basis, UHL shall demonstrate that its quality system is sufficiently developed, and that its monitors are appropriately sited and adequate in number to meet EPA's minimum requirements. In addition, UHL shall review its AQS/PARS data and site/monitor parameters in the AQS database for errors during the previous calendar year, and then generate graphical and statistical summaries of the data. UHL shall evaluate the data relative to EPA acceptance criteria for data completeness, precision and accuracy. On the basis of this review, UHL shall submit its annual State and Local Air Monitoring Stations (SLAMS) certification letter. The Annual Network/Quality Assurance review shall contain the following components:

- a complete, current set of Quality assurance documentation (QMP/QAPP's/SOP's) submitted to the Department in electronic format (PDF),

- AQS/PARS raw data listings generated from the AQS system (AQS AMP 250 and AMP 350) reports in electronic format for all monitors operated by UHL for the calendar year under review,

- graphs of concentration vs. time submitted in hard copy and electronic formats for all monitors operated by UHL for the calendar year under review,

- complete, current network review questionnaire contained in Volume II Part I, Appendix 15, Sections 1 and 2, of EPA's Quality Assurance Handbook for Air Pollution Measurement Systems (rev 8/98), in hard copy and electronic formats,

- an annual quality assurance report following the example contained in Volume II Part I, Appendix 16, of EPA's Quality Assurance Handbook for Air Pollution Measurement Systems (rev 8/98), in hard copy and electronic formats,

- written reports of findings and recommendations based on the annual review in hard copy and electronic formats,

- an annual SLAMS report (AQS AMP 450) along with a letter certifying the accuracy of the report based on a review of all materials contained in the annual review in hard copy and electronic formats.

The Annual Network/Quality Assurance Review shall be submitted to the Department by March 15.

UHL will conduct an annual systems audit of the toxics and filter weighing laboratories using a protocol approved by the Department and consistent with EPA Guidance (EPA QA/G7). Reports summarizing the most recent toxics and filter weighing laboratory audits shall be submitted to the Department as a component of the Annual Network/Quality Assurance Review.

3.2.3.2. External Quality Assurance Activities (Outside UHL's Reporting Organization)

Polk and Linn County Quality Assurance Audits. UHL will perform quality assurance reviews of the Polk and Linn County Local Programs air quality laboratories and monitoring programs using the forms and procedures found in Volume II, Part I, Appendix 15, Section 2 of EPA's Quality Assurance Handbook for Air Pollution Measurement Systems (rev 8/98). The questionnaires shall be completed and submitted to the Department by UHL no later than March 15, and written reports of findings and recommendations will be provided, in duplicate, no later than April 1.

Prevention of Significant Deterioration (PSD) Ambient Monitoring Sites. Within 30 days of DNR's written request UHL will review and provide written comments on the standard operating procedures and quality assurance plan components of facility PSD ambient monitoring plans. UHL will continue to work with facilities to ensure that the data gathered during the monitoring period is of acceptable quality. UHL shall observe and evaluate (quarterly) site audits of facility-run PSD ambient monitoring sites at specified PSD facilities. These site audits are to be performed in accordance with Appendix B of 40 CFR Pt. 58. Within 2 weeks after the site audit, UHL will provide, in writing, the audit results and any recommendations for corrective actions to both DNR and the field staff operating the PSD site(s). To ensure format compatibility with EPA's AQS database, UHL will provide quality assurance reviews on ambient monitoring data generated by facility-run PSD monitoring sites, as specified by DNR. The number of PSD monitoring sites shall be limited to no more than four sites per year. UHL will be compensated for additional sites at the rate of \$1000 per site, to be billed to its "Operation and Expenses" variable cost line item.

3.2.4. EXISTING NETWORK AND NETWORK MODIFICATIONS

Network Modifications. UHL shall operate the monitoring network indicated in Appendix AQ1 with modifications as indicated in Appendix AQ2. In addition, UHL shall work with the DNR to site additional monitors in response to public health concerns that develop during the contract period, as resources and time allow.

New Monitoring Sites. Potential monitoring sites will meet the specifications set forth in Appendices D and E of 40 CFR 58. UHL shall not set up a new monitor site, dismantle an existing monitor site, or relocate any existing monitors without written approval from DNR.

Change in Sampling Frequency. UHL shall change sampling frequency at a monitor site within 30 days of written notice by the DNR.

3.2.5. NETWORK PLANNING

Training and Safety Plan. UHL shall implement training and safety plans developed for all air monitoring staff. UHL shall ensure that its staff are adequately trained and work in a safe environment. UHL shall present its training schedule at each quarterly management meeting.

Quarterly Meetings. Quarterly coordination meetings will be arranged for technical and management staff involved in the air quality program. The technical staff meeting will focus on data collection, transmission and quality assurance issues and trends. UHL management meetings shall include a report prepared by UHL managers on the status of the work products contained in the contract.

Inventory. UHL shall maintain a complete and current list of all equipment which is part of the air monitoring system in the state of Iowa, including the location, description of equipment type, model number, serial number, ownership agency, and both DNR and UHL inventory tag number. UHL shall record in the equipment inventory the installation date for any equipment newly installed in the air monitoring system.

Network Planning Report. UHL shall submit a proposal for additional equipment or staff desired for the next contract by February 15.

Annual Review of Computer Security. UHL shall submit an annual review of its computer security plan to the Department by August 1. This plan shall indicate the strategy by which UHL shall insure the security of all data gathered under the terms of this contract. The plan will be reviewed and signed by UHL's computer services supervisor.

Existing Vehicles. Twelve vehicles will be maintained and utilized by UHL for exclusive use by air quality personnel solely for the operation of the ambient air monitoring network. The current inventory includes: Van #1, U of I tag number 588406, Van #2, U of I tag number 553167, Van #3, U of I tag number 547703, Van #4, license number 10284, Truck #5, U of I tag number 574378, Van #6, U of I tag number 574370, Truck #7 U of I tag number 578526, Van #8, U of I tag number 578233, Truck #9 U of I tag 582230, Vehicle #10 U of I tag number 582104, Truck #11U of I tag number 585248, and Truck #12 U of I tag number 585579. The Department will not be responsible for mileage costs for a replacement vehicle(s) except for periods of time when the vehicle being replaced is undergoing repairs or maintenance, or when additional vehicles are needed.

New Vehicles. UHL will purchase two new cargo vans (or two other service vehicles, as needs require) for exclusive use by air quality personnel solely for operating the ambient air network, with funds to be provided by the DNR for this purpose. The vans shall be purchased no later than February 1, and, once purchased, shall be included in the equipment inventory.

3.2.6. DATA MANAGEMENT

Data Validation. Data obtained from ambient monitors shall be validated as specified in the approved QAPP and in this scope of work.

Data Validation for Continuous Monitors. UHL shall store short term (5 minute) monitoring data for the purpose of validation of all hourly continuous monitoring data. This data may be captured either by daily polling of all monitors, or by on site storage of short term data using ESC's "Digitrend Site" software.

Real-time monitoring. UHL shall display real-time monitoring data in hourly and AQI formats on its web site, and post data to EPA's ozone and particulate mapping server within 25 minutes after the end of each hour. Procedures and frequencies for polling and posting data shall be as indicated in UHL's real-time monitoring QAPP/SOP. UHL will upload all non-continuous data to the UHL real-time website on the same schedule that the data is submitted to the AQS database. UHL shall provide charts of FRM versus real time (FDMS-derived) concentrations for all continuous PM monitoring sites on its web-site.

Site Setup and Closure in AQS. UHL shall be responsible for opening and closing sites and monitors in the AQS database for its reporting organization, and for its monthly data uploads. UHL shall contact the DNR in order to confirm new site or monitor setup parameters are accurate before uploading the new parameters to the database. UHL will not close sites or monitors in the AQS database without approval from the DNR. UHL will inform the Department via e-mail

whenever modifications to the AQS database are made. This notification shall contain a note of explanation of the modifications made and the rationale for the modifications.

AQS/PARS Data Submission. Validated monitoring data (AQS data) and precision and accuracy data (PARS data) for all continuous monitors shall be uploaded by UHL staff to the AQS system by the 15th of the month following the month in which it is collected. Validated monitoring data and precision and accuracy (PARS) data for all non-continuous monitors shall be uploaded to AQS by the 28th of the month following the month in which it is collected. UHL will inform the Department via e-mail after completing its monthly data uploads. This report shall include a copy of the final version of the screening file, and copies of the edit and scan checks. In the event that the monthly data upload is not complete, this report shall indicate the reason for the backlog and the anticipated date when the backlogged data will be uploaded.

Data Screening. UHL shall archive an AQS AMP 120 to document the data uploaded immediately after each data file is loaded into the system.

Monthly AQS Record keeping Requirements. On a monthly basis, UHL shall:

- run and review the AQS AMP 250 and AQS AMP 350 monitor reports to determine the completeness and accuracy of the AQS and PARS data uploaded by UHL to the AQS system.

Quarterly AQS Record keeping Requirements. On a quarterly basis, UHL shall:

- run and review the AQS AMP 240 and AQS AMP 246 reports to evaluate the PARS data uploaded by UHL;

- run and review the AQS AMP 430 report in order to evaluate the quarterly data completeness of the monitors operated by UHL;

- run and review the AQS AMP 380 report in order to evaluate the accuracy and completeness of the site setup parameters of the monitors operated by UHL.

3.2.7. REPORTS

Immediate Reports. UHL will notify the Department immediately upon identification of any exceedance of an ambient air quality standard, emergency episode or potential emergency episode (as defined in 567 IAC 26.2), or exceedance of any other pollutant threshold provided in writing by the Department.

Weekly Network Status Report. UHL will transmit a written report of the status of air monitoring systems to the Chief of the Air Quality Bureau, on the first working day of every week. This report will note any sites or monitors that have been added or removed from the network during the previous week. For each site that is modified or for which data are missed, the report will also include:

- date of last valid data;

- date inoperative condition detected;

- cause of inoperative condition;

- step(s) taken to correct condition;

expected date data reporting will resume.

Monthly Monitoring Reports. UHL will submit to the Chief of the Air Quality Bureau, a monthly report within forty-five (45) days of the end of each month. This report will include a list of fixed station air monitoring sites in operation during the report period, and for each station:

the number of samples collected or received;

the number and type of analyses performed;

the number of exceedances of ambient air quality standards, the number of emergency episodes or potential emergency episodes, and the number of exceedances of pollutant thresholds;

a listing of all sampling that was omitted by reason of equipment failure, calibration, zero and span checks, sample handling accident, laboratory accident or failure of the operator to collect samples; the type and number of equipment failures;

the dates of PARS precision and accuracy checks; an explanation for precision checks that occur with a separation greater than 2 weeks;

the percentage of total possible samples which were translated into valid air quality data;

a listing of all backlogged AQS or PARS data, the reason for the backlog, and the date when the backlogged data will be uploaded to AQS.

an assessment of the Nafion dryer efficiency for all FDMS TEOM analyzers operated by UHL.

Quarterly Monitoring Report. UHL will submit to the Chief of the Air Quality Bureau, a quarterly report within forty-five (45) days of the end of each calendar quarter. This report will include a list of fixed station air monitoring sites in operation during the report period, and for each station:

the data completeness associated with each monitor; and, in the event the percentages do not meet EPA completeness criteria, an explanation of the reasons for the insufficient data and corrective action plan for the monitor;

the precision and accuracy of the monitors audited during the quarter, calculated as specified in 40 CFR Pt. 58 App. A;

a listing of all backlogged AQS or PARS data, the reason for the backlog, and the date when the backlogged data will be uploaded to AQS.

Inventory Reporting. UHL will supply to the Department a copy of the complete up to date equipment inventory within seven days of a request by the Department during the agreement period.

3.2.8. PM₁₀, PM_{2.5}, PM_{2.5} SPECIATION, AND TOXICS ACTIVITIES

Third Party Contractors for PM10, PM2.5 Federal Reference Method, and Visibility Sampler Operations. Where 3rd party filter collectors are used to gather PM10, PM2.5, or visibility filters within the UHL reporting organization, UHL shall perform all operations except for impactor replacement, filter collection and transmission of sampler performance data to UHL and the national visibility laboratory. UHL's duties include, but are not limited to, the performance of all calibrations, audits, and routine maintenance for all PM10, PM2.5, and visibility monitors within their reporting organization. For new sites where 3rd party operators are to be employed, UHL shall locate qualified 3rd party operators and train them to operate samplers in accordance with the UHL's standard operating procedures developed for 3rd party operators. UHL shall manage 3rd party operators to insure that the data generated meets Department goals for completeness and data quality.

PM2.5 Speciation Activities. UHL shall perform the following activities in support of the PM2.5 speciation network:

Field Activities. UHL shall perform all field activities at speciation sites specified in this agreement including canister replacement and filter collection and transmission of sampler performance data to EPA's National Speciation Laboratory. In addition, UHL shall be responsible for the performance of all calibrations, audits, and routine maintenance for all PM2.5 speciation monitors.

Data validation and AQS maintenance. UHL shall be responsible for setting up or shutting down speciation sites in AQS and shall validate speciated PM2.5 data in cooperation with EPA's National Speciation Laboratory.

Toxics Analysis Laboratory. UHL shall manage and operate the State's air toxics analysis laboratory in support of the State toxics monitoring network. The laboratory shall provide support and analysis for toxic samplers operated by contractors, the Local Programs, or by UHL, as directed by the DNR. The UHL toxics laboratory shall:

operate all laboratory equipment in accordance with EPA/DNR approved QAPP, SOP's, and manufacturer's operation manuals;

analyze canister and cartridge samples as well as other appropriate samples as determined by the DNR;

clean and evacuate sampling canisters and maintain an inventory of clean, evacuated canisters sufficient for Iowa toxics monitoring sites;

provide shipping containers, coolers, thermometers, and ice substitute packs as needed to insure sample handling is conducted in accordance with the QAPP and SOP's;

maintain an inventory of supplies and consumables sufficient to support toxic monitoring efforts in the State;

report toxic data analysis results to the Department within 30 days of toxic sample analysis. Immediately report toxic sample analysis results if sample dilution is necessary to lower the sample concentration to within the calibration range of the instrument.

Toxics Monitoring Activities. UHL shall perform the following toxic monitoring activities in support of the State toxics monitoring network.

Field Activities. UHL shall perform all field activities at toxic monitoring sites in the UHL network. These duties include sample collection, calibrations, audits, and routine maintenance for all toxics monitors. These duties shall be performed in accordance with EPA/DNR approved QAPP and SOP's.

Data validation and AQS maintenance. UHL shall be responsible for setting up or shutting down toxics sites in AQS and shall validate toxics data in accordance with EPA/DNR approved QAPP and SOP's. UHL shall upload toxics data to AQS unless otherwise directed by the Department.

Teflon Filter Weighing Laboratory. UHL shall manage and operate the State's Teflon filter weighing laboratory. This laboratory shall provide support for Teflon filter monitors run by contractors, the Local Programs or by UHL, as directed by the DNR. The filters submitted may be from either mini-vol samplers or FRM samplers. UHL shall:

- operate in accordance with DNR/EPA approved QAPP's and associated SOP's for all Teflon filter weighing laboratory operations;

- order filters and manage the Teflon filter inventory so that sufficient filters are available in order to meet the sampling needs of its customers;

- pre-weigh the filters, load them into clean filter holders, and load the filter holders into clean filter magazines within the laboratory;

- provide shipping containers to mail the filter magazines to the field operators;

- provide coolant and thermometers to ensure that the loaded filters are adequately cooled in transport from the field back to the weighing laboratory;

- equilibrate and weigh the loaded filters, and provide the results of the gravimetric analysis along with all other laboratory data required for upload to the AQS system to its customers in a format that can be directly uploaded to AQS. The data shall be sent by e-mail to all customers and DNR Local Program contacts by the 28th of the month following the month in which the data were collected;

- archive all FRM filters, as well as filters from portable samplers where directed by the DNR, in refrigerated storage in accordance with EPA guidance;

- arrange for UHL staff to pick up filters from the Polk County Local Program.

3.2.9. SPECIAL PROJECTS

UHL shall complete the following special projects:

Temperature and Relative Humidity Data. UHL will collect ambient temperature and relative humidity data from all sites with continuous particulate analyzers and upload validated hourly temperature and relative humidity values to the AQS database on the same schedule as other hourly data.

UHL shall install and operate a trace-level CO analyzer at the 10th and Vine monitoring site beginning on October 1. UHL will provide the department with a final SOP for operation of the analyzer by September 1.

Particulate Nitrate Analyzer. UHL shall operate a particulate nitrate analyzer at the 10th and Vine monitoring site from October 1 through April 30. UHL shall update SOP's as necessary prior to beginning operation of the analyzer.

UHL shall install R&P 2025 samplers for PM10 at the Lake Sugema and Viking Lake monitoring sites and begin collecting data on a 1:3 schedule on January 1.

UHL shall operate a PM2.5 audit sampler at locations selected by the Department during the contract period.

Where feasible, UHL shall install broadband or cellular connections at monitoring sites by June 30.

Trace-Level Gas Sampling. Within 40 days of receipt of equipment, UHL shall supply the Department with finalized QAPP's and SOP's and install trace-level gaseous monitors at designated monitoring sites.

Survey Sampling/ Public Outreach. Within 30 days of a request by the Department, UHL will perform monitoring using portable samplers or passive samplers at sites designated by the Department. Within 30 days of sampling or passive sampler analysis, UHL will issue a report summarizing the results and methodology used in the survey. Before initiating survey or passive sampling, UHL will develop QAPP's and SOP's for siting survey or passive samplers, calibration and operation of sampling equipment, analytical methods used to develop samples, and data reduction and analysis techniques. In addition, within 30 days of a request of the Department, UHL shall distribute portable or passive samplers to members of the public and train them in the operation of these samplers. The UHL or other DNR approved laboratory shall be responsible for analyzing the results of these sampler runs, and submitting a report to the sample operator and to the DNR within 30 days of a sample run.

Ozone Monitor Co-location. UHL shall co-locate all ozone monitors (with the exception of the Sugema ozone site) that record ozone exceedances during the 2006 and (beginning of) the 2007 ozone season. The co-located monitors shall be in place by September 1. Precision checks, audits, and calibrations shall be performed on the co-located monitors in the same manner as for the primary sampler. Data from the co-located sampler shall be used to validate real-time monitoring data and to substitute for primary sampler data should the primary sampler fail.

PM10 Filter and Continuous Analyzer Co-location. UHL shall maintain co-located continuous PM10 FEM TEOM analyzers at PM10 filter sampler sites that have measured exceedances of the PM10 NAAQS. The co-located samplers shall be operated in a manner consistent with CFR requirements for continuous PM10 FEM samplers with the exception that precision and accuracy data shall not be entered into the AQS database. Co-located FEM TEOM analyzer data will not be entered into the AQS database except in the event of a missed sample from the filter sampler.

Sampling Frequency for PM10. UHL shall increase the PM10 sampling frequency at its 10th and Vine monitoring site to 1 sample each day and shall increase the PM10 sampling frequency at its Council Bluffs monitoring site to one sample every third day on January 1.

Sampling Frequency for PM2.5. UHL shall increase the PM2.5 sampling frequency at the Muscatine, Garfield School and Clinton, Rainbow Park PM2.5 sites to daily sampling on January 1.

Ion Analysis.

UHL shall coat and extract denuders, and perform ion analysis for particulate filters as requested by the DNR during the contract year. Results of ion analysis performed for the department shall be submitted to the Department within 30 days of sampling.

UHL shall initiate anion speciation sampling on nylon filter media at the 10th and Vine monitoring site. UHL will coat denuders, prepare filters, load speciation sampler canisters, and conduct analysis for sulfate, nitrate and other anions as specified by the department on a one in three day schedule beginning on October 1.

3.3 ASBESTOS NESHAP PROGRAM

General Provisions for Samples Submitted by the Department. UHL will analyze all samples submitted by departmental staff as described in the second paragraph of this section. Sample containers for sample transport will be provided by UHL. The results of the tests will be forwarded to the Air Quality Section within fifteen (15) calendar days of receipt. Extra time for analysis is allowed in cases when the analytical work warrants. A notification to the submitter, stating that analytical results from a sample will be delayed and the reason for the delay, will be made within fifteen (15) calendar days of receipt of the sample if extra time is required for analysis.

Sample Analysis. UHL may analyze 300 samples for asbestos submitted by Department staff. The rate per sample shall be \$33. Unless otherwise directed, the analysis will use the published polarized light microscopy method from 40 CFR Part 763 Appendix A to Subpart F. These samples will be collected during NESHAP compliance evaluation inspections of asbestos abatement contractor work. Samples collected for this activity will be coded as AQ-AB.

ARTICLE IV - REPORTS AND PRODUCTS

Contract Section	Report or Product	Date Due
3.2.2	Monitoring Network Expenses	30th day after the end of the calendar month
3.2.2	Sampler Operator Expenses	30th day after the end of the calendar month
3.2.2	Installation Costs	30th day after the end of the calendar month
3.2.3.1	QAPP/SOP's for New Equipment	40 days following receipt; before deployment
3.2.3.1	QAPP/SOP Revision	40 days following notification by EPA, DNR
3.2.3.1	QAPP/SOP Revision	40 days following promulgation of new rules or procedures by EPA
3.2.3.1	Copy of all proposed QAPP/SOP Revisions to Department	at least 15 days before proposed implementation date
3.2.3.1	Submission of Annual Network/Quality Assurance Review	March 15
3.2.3.2	Polk/Linn County QA Audit Complete Questionnaire	March 15
3.2.3.2	Polk/Linn County QA Audit Written Report	April 1
3.2.3.2	PSD Monitoring Sites QAPP review	within 30 days following DNR's written request
3.2.3.2	PSD Monitoring Sites Site Audits	on the quarterly monitoring schedule
3.2.3.2	PSD Monitoring Sites Site Audit Report	two weeks after site audit
3.2.3.2	PSD Monitoring Sites Data Review	within 30 days following DNR's written request
3.2.4	Network Modifications	See Appendix AQ2
3.2.4	Sampling Frequency Change	within 30 days following DNR's written request
3.2.5	Management Meetings	Quarterly
3.2.5	Technical Staff Meetings	Quarterly
3.2.5	Network Planning Report	February 15
3.2.5	Computer Security Plan	August 1
3.2.5	Purchase of New Vans (2)	February 1
3.2.6	E-mail Notice of AQS Site/Monitor Changes	whenever database modifications are made

ARTICLE IV - REPORTS AND PRODUCTS (CONT.)

Contract Section	Report or Product	Date Due
3.2.6	AQS/PARS Data Upload (Continuous Monitors)	15th of the month following the month of data collection
3.2.6	AQS/PARS Data Upload (non-Continuous Monitors)	28th of the month following the month of data collection
3.2.6	E-mail Notice of Monthly AQS Upload w/ Screening File and Error Reports	after monthly data has been uploaded
3.2.6	Backlog Report	after monthly data has been uploaded
3.2.7	Report of NAAQS Exceedance, Episode, or Threshold Exceedance	immediately, with immediate written follow-up
3.2.7	Weekly Network Status Report	1st day of each week
3.2.7	Monthly Monitoring Report	within 45 days of the end of each month
3.2.7	Quarterly Monitoring Report	within 45 days of the end of each quarter
3.2.7	Inventory Report	within 7 days of request
3.2.8	PM2.5 Gravimetric Results To Local Programs	28th of the month following the month of data collection
3.2.9	Trace-level gas monitoring QAPP/SOP (final)	Within 40 days of receipt of equipment
3.2.9	Trace-level gas sampling begins	Within 40 days of receipt of equipment
3.2.9 App AQ2	Trace-level CO at 10 th and Vine	October 1
3.2.9 App AQ2	Trace-level CO QAPP and SOP (final)	September 1
3.2.9 App AQ2	Speciation Sampling for anions on nylon filters 10 th and Vine (1:3)	October 1
3.2.9		
3.2.9 App AQ2	Install and Operate PM10 (2025) samplers at Viking Lake and Lake Sugema (1:3)	January 1
3.2.9	Survey or Passive Sampling Performed	within 30 days of request
3.2.9	Survey Sampling Report to Department	within 30 days of sampling

ARTICLE V - DESIGNATION OF OFFICIALS

5.1 Department - The Director of the Department is the official authorized to execute any changes in terms, conditions, or amounts specified in this agreement. Wayne Gieselman is designated to negotiate, on behalf of the Department, and subject to the approval of the Director, any changes to this agreement.

5.2 The University of Iowa Business Manager or Director of Sponsored Programs is the official authorized to execute any changes in the terms, conditions, or amounts specified in this Agreement on behalf of the University of Iowa subject to the approval of the Director of the University of Iowa Hygienic Laboratory.

ARTICLE VI - KEY PERSONNEL

Jeff Wasson, Randy Hudachek

ARTICLE VII - TIME OF PERFORMANCE

The performance of these contract activities by UHL is to commence July 1, 2006. The performance required herein shall be completed by June 30, 2007, except as provided herein.

ARTICLE VIII - CONDITIONS OF PAYMENT

8.1 UHL shall be reimbursed on a product or a production basis for authorized costs incurred up to the maximum stated in Article IX.

8.2 Reimbursement for the items in the Variable Payment Agreement Amount column will be made monthly. An invoice for the actual amount of the analytical or other cost involved for each of these items will be accompanied by copies of the appropriate monthly report for the billing period as described in Article III. Where possible, monthly costs associated with Article III shall be reported on a site-specific basis.

8.3 Partial payment shall be processed only when Article IX of the Special Conditions specifies a per unit fee. In all other cases, the provisions of Article VIII, 8.2, of the Special Conditions shall apply.

8.4 The Department shall not process payment for items of work or service which, in the determination of the Department, do not meet the specification of Article III of the Special Conditions. If the item of work or service is resubmitted by a date agreed to by the Department and UHL through an amendment to this Agreement and is determined by the Director of the Department to be satisfactorily completed according to the specifications of Article III (Special Conditions), payment shall be processed.

8.5 If any item of work of service specified in Article III of the Special Conditions is received more than three working days after the due date specified in Article III, a late penalty may be assessed. The penalty shall be up to five percent (5%) of the amount specified for the late item. The Department shall have the option of terminating this agreement for cause within the meaning of Section 7.1 of the General Conditions if UHL submits any items of work or service more than ten (10) working days after the due date.

8.6 The Director may waive the application of Article VIII (8.5) of the Special Conditions for any or all items of work or service specified in Article III of the Special Conditions.

ARTICLE IX - ESTIMATED AGREEMENT BUDGET

TASK DESCRIPTION	VARIABLE PAYMENT AGREEMENT ESTIMATE (\$)*
Ambient Air Monitoring	
Staff	\$1,237,910
Operation and Expenses	\$315,000
Cargo Vans	\$60,000
Ion Filter Analysis	\$50,000
Air Toxics Analysis	\$90,000
Computers/Software	\$25,000
Training	\$25,000
Asbestos	
Sample Analysis	\$10,000
TOTAL	\$1,812,910

* The amounts in this column are to be billed to the Department monthly. The total amount may change during the contract period. These are only estimates of the final values.

GENERAL CONDITIONS

Section 1.0 Entire Agreement

This agreement constitutes the entire agreement between the Department and UHL with respect to the Air Quality Program activities, and UHL acknowledges that it is entering into the agreement solely on the basis of the terms and conditions herein contained and not in reliance upon any representation, statement, inducement or promise, whether oral or written, not contained herein.

Section 2.0 Amendment

In order to be valid any amendment of this agreement, or change in the conditions or terms of this agreement, must be in writing and signed by the officials designated in Article V of this agreement.

Section 3.0 Termination Due to Non-appropriation

Notwithstanding any other provision of this Contract, if funds anticipated for the continued fulfillment of the contract are, at any time, not forthcoming or are insufficient, either through the failure of the Department to appropriate funds or funding from a federal source is reduced or discontinued for any reason, or through discontinuance or material alteration of the program for which funds were provided, the Department shall give the vendor written notice as soon as practical documenting the lack of funding, discontinuance or program alteration. Unless otherwise agreed to by the parties, the Agreement shall terminate on the last day of the fiscal year for which appropriations were available. However, in the event that an appropriation to cover the cost of this Contract becomes available within sixty (60) days subsequent to termination under this section, the Department agrees to re-enter the Agreement with the terminated vendor under the same provisions, terms and conditions as the original Contract.

Section 4.0 Records and Audit

4.1 UHL agrees to maintain books, documents, and other records pertaining to all costs and expenses incurred and revenues acquired during this agreement in accordance with generally accepted accounting principles and practices consistently applied and 40 CFR Part 31 in effect on the date of execution of this agreement.

4.2 UHL shall also maintain the financial information and data used in the preparation or support of the cost submission required under 40 CFR 31.36(f) for this agreement.

4.3 The Director of the Department or any duly authorized audit representative thereof shall have access for the purpose of audit and examination of any books, documents, papers and records of UHL which are pertinent at all reasonable times during the period of retention provided for in paragraphs 4.4, 4.5 and 4.6 below and shall have the right to make copies or to excerpt or make other transcriptions thereof. Access to records is not limited to the required retention periods. The Department or its representatives shall have access to records at any reasonable time for as long as the records are maintained.

4.4 All records in the possession of UHL pertaining to this agreement shall be retained by UHL for a period of three (3) years beginning with the date upon which the final payment under this agreement is issued. Records for non-expendable property acquired under this agreement shall be retained for a three (3) year period after the final disposition of the property.

4.5 Records relating to any litigation or claim arising out of the performance of this agreement, or costs or expenses of this agreement to which exception has been taken as a result of inspection or audit shall be retained by UHL until such litigation, claim, or exception has been finally settled or until the three-year period has expired, whichever occurs later.

4.6 UHL, in maintaining project expenditure accounts, records and reports, shall make any necessary adjustments resulting from any administrative reviews and audits by the United States or by the state of Iowa or by UHL.

4.7 The University of Iowa shall ensure that an independent audit is conducted in accordance with generally accepted standards and with established procedures and guidelines of the Auditor of the State of Iowa. A copy of such audit shall be provided to the Department once completed.

4.8 UHL will provide a copy of the audit performed under Article 4.7 to the Department within one year of project completion.

Section 5.0 Allowable Costs

5.1 Allowable costs are specified under the Approved Budget presented in the Special Conditions of this agreement. Allowable costs in agreements with public or non-public agencies are subject to the cost the principles defined in Office of Management and Budget Circulars A-21 and A-110 as amended.

5.2 Indirect costs shall be allowable at a predetermined rate specified in the approved budget presented in the Special Conditions of this agreement. Indirect cost rates, if applicable, for public or non-profit agencies shall be determined according to the principles defined in Office of Management and Budget Circulars A-21 and A-110 as amended.

Section 6.0 Unallowable Costs

6.1 Section not applicable to this agreement.

Section 7.0 Termination of Contract

7.1 Termination for cause. The Department may terminate this agreement in whole or in part, at any time before the date of completion, whenever it is determined that UHL has failed to comply with the conditions of the agreement or if funds totaling the amount specified in Article IX of the Special Conditions are not available to the Department. Before any termination, the Director shall provide UHL an opportunity for consultation. The Department shall notify UHL in writing of any termination. The notice shall state the reasons for the termination. UHL must stop work immediately upon notification of termination. The Department will not provide any reimbursement for new commitments after the notice of termination. Payments made to UHL or recoveries by the Department under agreements terminated for cause shall be in accordance with the legal rights and liabilities of the parties.

7.2 Termination for convenience. The Department or UHL may terminate the agreement in whole, or in part, when both parties agree that the continuation of the agreement would not produce beneficial results commensurate with the future expenditure of funds. The two parties shall agree upon the termination conditions, including the effective date and, in the case of partial obligations, for the terminated portion after the effective date, and shall cancel as many outstanding obligations as possible. The Department shall allow full credit to UHL for the Department's share of the noncancellable obligations, properly incurred by UHL prior to termination. The termination agreement must be in writing and signed by the officials designated in Article V of the Special Conditions.

7.3 Rights in incomplete products. In the event the agreement is terminated, all finished or unfinished documents, data, reports or other materials prepared by UHL under this agreement shall, at the option of the Department, become the Department's property and UHL shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials.

Section 8.0 Equal Employment Opportunity

8.1. UHL will not discriminate against any employee or applicant for employment because of race, creed, color, religion, sex, national origin, age, or mental or physical disability. UHL will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, creed, color, religion, sex, national origin, age or mental or physical disability except where mental or physical disability relates to a bona fide occupational qualification reasonably necessary to the normal operation of UHL's business. Such action shall include but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation and selection for training, including apprenticeship. UHL agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth provisions of this nondiscrimination clause.

8.2. UHL will in all solicitations or advertisements for employees, placed by or on behalf of UHL, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, religion, sex, national origin, age, or mental or physical disability except where mental or physical disability is a bona fide occupation qualification reasonably necessary to the normal operation of UHL's business.

8.3. UHL will comply with all relevant provisions of the Iowa Civil Rights Act of 1965 as amended, Iowa Executive Order 15 of 1973, Chapter 19B, Code of Iowa, Federal Executive Order 11246 of 1965 as amended by Federal Executive Order 11376 of 1967 and Title VI of the Civil Rights Act of 1964 as amended. UHL will furnish all information and reports requested by the state of Iowa or required by, or pursuant to, the rules and regulations thereof and will permit access to payroll and employment records by the state of Iowa for purposes of investigation to ascertain compliance with such rules, regulations or requests, or with this nondiscrimination clause.

8.4. In the event of UHL's noncompliance with the nondiscrimination clauses of this agreement or with any of the aforesaid rules, regulations or requests, this agreement may be canceled, terminated or suspended in whole or in part. In addition, the state of Iowa may take such further action, and such other sanctions may be imposed and remedies invoked, as provided by the Iowa Civil Rights Act of 1965 as amended, Chapter 601A, Code of Iowa, or as otherwise provided by law.

8.5. UHL will include the provisions of paragraphs 8.1. through 8.4. hereof in every subcontract, unless specifically exempted by approval of the state of Iowa, so that such provisions will be binding on each subcontract. UHL will take such action with respect to any subcontract as the state of Iowa may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event UHL becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the state of Iowa, UHL may request the state of Iowa to enter into such litigation to protect the interests of the state of Iowa.

Section 9.0 Interest of UHL and Others

UHL covenants that it presently has no interest and shall not acquire any interest, direct and indirect, which would conflict in any manner or degree with the performance of services required under this agreement.

UHL further covenants that in the performance of this agreement no person having any such interest shall be employed.

Section 10.0 Assignment of Interest

Neither the agreement nor any interest therein nor claim thereunder shall be assigned or transferred by UHL to any other party or parties. Attempted assignment may be considered, at the option of the Department, to be substantial breach and cause for termination within the meaning of section 7.1 of the General Conditions.

Section 11.0 Personnel

11.1. Selection. UHL represents that it has, or will secure, all personnel required in performing the work and services under this agreement. Such personnel shall not be employees of or have any contractual relationship with the Department.

11.2. Qualification. All of the work and services required thereunder will be performed by UHL or under UHL's supervision and all personnel engaged in the work shall be fully qualified and shall be authorized under state and local law to perform such services.

11.3. Change of Key Personnel. Any individual specified by name in Article VI of the Special Conditions herein is considered essential to the work and services to be performed. If for any reason substitution for a specified individual becomes necessary, UHL shall provide immediate written notification of such to the Department. UHL shall provide the name and resume' of qualification for the replacement individual. Any replacement shall be subject to the approval of the Department.

Section 12.0 Subcontracts

None of the work or services required under this agreement shall be subcontracted by UHL without the prior written approval to subcontract by the Department and the prior written approval of the subcontract itself by the Department. Attempted subcontracting may be considered, at the option of the Department, to be substantial breach and cause for termination within the meaning of section 7.1 of the General Conditions. Any subcontract exceeding \$25,000 approved by the Department and entered into by UHL shall contain at a minimum, the General Conditions of this agreement.

Section 13.0 Effect of Invalidity

If any of the provisions herein shall be in conflict with the laws of the state of Iowa, and shall be declared to be invalid by any court of record in this state, such validity shall be construed to affect only such portions as are declared invalid or in conflict with the law and such remaining portion or portions of the agreement shall remain in effect and shall be construed as if such invalid or conflicting portion of the agreement were not contained herein.

Section 14.0 Indemnification

14.1. The University of Iowa shall be responsible and agrees to pay for any and all claims for wrongful death, personal injury, or property damage incurred by reason of the negligence of the University or its employees arising from activities under this agreement to the full extent permitted by Chapter 669, Code of Iowa, which is the exclusive remedy for processing of tort claims against the State of Iowa.

Section 15.0 Patents

15.1 Definitions. "University Intellectual Property" shall mean individually and collectively all inventions, improvements and/or discoveries which are conceived and/or made (i) by one or more employees of University, or (ii) jointly by one or more employees of University and by one or more employees of the Department, in performance of this Agreement.

15.2 All rights title and interest to University Intellectual Property under this Agreement, except as provided in Article 15.4, shall belong to University and shall be subject to the terms and conditions of this Agreement.

15.3 Rights to inventions, improvements, and/or discoveries, whether patentable or copyrightable or not, relating to this Agreement made solely by employees of the Department shall belong to the Department. Such inventions, improvements, and/or discoveries shall not be subject to the terms and conditions of this Agreement.

15.4 Rights to inventions, improvements, and/or discoveries conceived and/or made during the term of this Agreement, whether patentable or copyrightable or not, relating to this Agreement, which are made jointly by employees of University and employees of the Department, shall be the joint property of University and the Department and shall be subject to the terms and conditions of this Agreement.

15.5 University will promptly notify the Department of any University Intellectual Property conceived and/or made during the term of this Agreement. If the Department directs that a patent application or application for other intellectual property protection be filed, University shall promptly prepare, file, and prosecute such U.S. and foreign application in University's name. The Department shall bear all costs incurred in connection with such preparation, filing, prosecution, and maintenance of U.S. and foreign application(s) directed to said University Intellectual Property. The Department shall cooperate with University to assure that such application(s) will cover, to the best of the Department's knowledge, all items of commercial interest and importance. While University shall be responsible for making decisions regarding scope and content of application(s) to be filed and prosecution thereof, the Department shall be given an opportunity to review and provide input thereto. University shall keep the Department advised as to all developments with respect to such application(s) and shall promptly supply to the Department copies of all papers received and filed in connection with the prosecution thereof in sufficient time for the Department to comment thereon.

15.6 If the Department elects not to exercise its option granted in Article 15.7 or decides to discontinue the financial support of the prosecution and maintenance of the patent protection, all right, title and interest in such patent, patent application, and University Intellectual Property shall automatically revert to University. University shall then be free to file or continue prosecution or maintain any such application(s), and to maintain any protection issuing thereon in the U.S. and in any foreign country at University's sole expense.

15.7 Subject to Article 15.4, University grants the Department the first option to elect an exclusive license, subject to U.S. government rights, to University Intellectual Property developed under this Agreement, and a right to sub-license any and all University Intellectual Property developed under this Agreement on terms and conditions to be mutually agreed upon. If the Department elects to exercise this option, the Department shall notify University in writing of its decision within one year from the date of termination of this Agreement.

15.8 No grant described in this Article shall be construed to limit University's right to utilize University Intellectual Property for research purposes.

Section 16.0 Copyrights and Use of Data

16.1. The term "subject data" as used in this clause includes writing, technical reports, sound recordings, magnetic recordings, computer programs, computerized data bases, data bases in hard copy, pictorial reproductions, plans, drawings, including engineering or manufacturing drawings, specifications, or other graphical representations, and works of any similar nature (whether or not copyrighted) which UHL submits or which the Department specifies to be delivered under this agreement or which UHL develops or produces and the Department pays for under this agreement. The term does not include financial reports, cost analyses, and other information incidental to agreement administration.

16.2. Except as may otherwise be provided in this agreement, when publications, films, or similar materials are developed directly or indirectly from a project supported by the Department, UHL is free to arrange for copyright without approval. UHL agrees to and does hereby grant to the Department, and to its officers, agents, and employees acting within the scope of their official duties, a royalty-free, nonexclusive, and irrevocable license throughout the world for Department purposes to publish, translate, reproduce, deliver, perform, dispose of and to authorize others so to do, all subject data, or copyrightable material based on such data, covered by copyright now or in the future.

16.3. UHL shall not include in the subject data any copyrighted matter without the written approval of the Director, unless he or she provides the Department with the written permission of the copyrighted owner for the Department to use the copyrighted matter in the manner provided in 16.2 above.

16.4. Nothing contained herein shall imply a license to the Department under any patent or be construed as affecting the scope of any license or other rights otherwise granted to the Department under any patent.

16.5. Unless otherwise limited below, the Department may, without additional compensation to UHL, duplicate, use, and disclose in any manner and for any purpose whatsoever, and have others so do, all subject data.

16.6. Notwithstanding any provisions of this agreement concerning inspection and acceptance, the Department shall have the right at any time to modify, obliterate, or ignore any marking restricting disclosure of subject data if the marking is not authorized by the terms of this agreement.

16.7. Data need not be furnished for standard commercial items or services which are normally sold, or have been sold, or offered to the public commercially by any supplier and which are incorporated as component parts in or to be used with the product or process being developed or investigated under this agreement if, in lieu thereof, identification of source and characteristics (including performance specifications, when necessary) sufficient to enable the Department to procure the part or practice the process, or acquire an adequate substitute, are furnished.

16.8. In addition to any data specified elsewhere in this agreement to be furnished to the Department, the recipient shall retain and, upon written request of the Director at any time during project performance or within two years after project performance is completed, deliver any subject data not previously delivered.

16.9. UHL shall exert all reasonable effort to advise the Director of the Department, at the time of delivery of the subject data furnished under this agreement, of all invasions of the right-of-privacy contained therein and of all portions of such data copied from work not composed or produced in the performance of this agreement and not licensed under this section.

16.10. UHL shall report to the Director of the Department, promptly and in reasonable written detail, each notice or claim of copyright infringement received by UHL with respect to all subject data delivered under this agreement. On receipt of this information, the parties hereto agree to confer to determine future uses to be made of the subject data.

16.11. UHL or any or all of its employees or agents may duplicate, use and disclose all subject data deliverable under this agreement, provided that UHL or such employees or agents acknowledge the contribution of the Department and the agreement number of this agreement and any copyright secured for such data; provided further that there shall be no pre-release or publication of data or findings connected with this agreement in scholarly or professional journals or through public presentation or news release or otherwise until the performance of this agreement is completed, unless prior written authorization has been obtained from the Department's Director.

Section 17.0 Notice and Assistance Regarding Patent and Copyright Infringement

17.1. UHL agrees to report to the Department's Director promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this grant of which UHL has knowledge.

17.2. In the event of any claim or suit against the Department, the state of Iowa, or the United States, on account of any alleged patent or copyright infringement arising out of the performance of this agreement or out of the use of any supplies furnished or work or services performed thereunder, UHL agrees to furnish to the Department, when requested by the Director, all evidence and information in possession of UHL pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Department except where UHL has agreed to indemnify the Department.

Section 18.0 Title to Equipment and Property Inventory

18.1 The definition of equipment contained in Chapter 401-7.4(1) of the Iowa Administrative Code shall apply to this agreement.

18.2 This agreement shall supersede any and all agreements by and between the Department and UHL with respect to equipment. Equipment purchased under previous Department/UHL agreements or purchased through amendment to this agreement is to be listed on the joint Department/UHL equipment inventory. UHL shall ensure through the University of Iowa equipment inventory process that all equipment listed on the joint Department/UHL inventory has been marked with University of Iowa property tags.

18.3 Equipment listed in the Department/UHL Equipment Inventory was obtained in part from federal grant funds. In accordance with Title 40 Code of Federal Regulations, Part 30, the Department as the grantee agency retains title to all equipment listed on the Department/UHL Inventory and may require its return upon 30 days written notice.

18.4 UHL shall account for all equipment on the Department/UHL equipment inventory in the event of damage, loss or theft incurred through normal usage.

18.5 UHL shall use the equipment in a careful and proper manner and provide routine repairs, service and supplies required for the normal operation of the equipment.

18.6 The Department and UHL shall agree in writing prior to subleasing or transferring rights to the equipment to any third party.

18.7 The Department shall have the right to enter the premises where the equipment is located for the purpose of inspecting the equipment at any reasonable time.

18.8 UHL shall submit to the Department an annual inventory of joint Department/UHL equipment. The following shall be included as part of such inventory.

- a. UI property tag number.
- b. Equipment description.
- c. UI purchase order number.
- d. UI purchase order date.
- e. Equipment cost as shown on invoice.
- f. A list of additions to the previous years inventory including the cost for each item and the total cost.
- g. A list of deletions from the previous years inventory including the cost of each item, total cost and reason for deletion.
- h. An inventory balance sheet including totals as follows:
 - 1) Previous years inventory total.
 - 2) Current years deletions total.
 - 3) Current years additions total.
 - 4) Current years inventory total.
- i. Signed certification that the inventory as presented is true and correct.

18.9 Equipment costs shall not change once listed on the Department/UHL joint property inventory. Equipment parts that are added to or removed from existing equipment shall be handled in the following manner:

- a. Parts that do not fit the definition of equipment used in this agreement shall not be accounted for on the joint property inventory.
- b. Parts that do fit the definition of equipment used in this agreement shall be tagged and listed individually on the joint inventory.

These provisions do not apply to integral component parts utilized in the repair of equipment and necessary to continued operation of the equipment.

Section 19.0 Privity of Agreement

This agreement is expected to be funded in part with funds from the U.S. Environmental Protection Agency. Neither the United States nor any of its departments, agencies or employees is, or will be, a party to this agreement or any subcontract. This agreement is subject to regulations contained in 40 CFR Part 31 in effect on the date of the assistance award for this project.

Section 20.0 Remedies

Unless otherwise provided in this agreement all claims, counter-claims, disputes and other matters in question between the Department and UHL arising out of, or relating to, this agreement or the breach of it will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the state of Iowa. All claims, counter-claims, disputes or other matters will be determined by the laws of the state of Iowa unless federal law or regulations govern.

Section 21.0 Cost Price Data

21.1. UHL, where appropriate, assures that the cost and pricing data submitted for evaluation with respect to negotiation of prices for this agreement is based on current, accurate and complete data supported by their books and records. If the Department determines that any price (including profit) negotiated in connection with this agreement or amendment thereunder was increased by any significant sums because the data provided was incomplete, inaccurate or not current at the time of submission, then such price or cost or profit shall be reduced accordingly and UHL shall modify the agreement in writing to reflect such action. Failure to agree on a reduction shall be subject to the remedies clause (Section 20) of this agreement.

Section 22.0 Gratuities

22.1. If the Department finds after a notice and hearing that UHL or any of UHL's agents or representatives offered or gave gratuities (in the form of entertainment, gifts or otherwise) to any official, employee or agent of the Department, the state or Federal government in an attempt to secure an agreement or favorable treatment in awarding, amending or making any determinations related to the performance of this agreement, the Department may, by written notice to UHL, terminate this agreement. The Department may also pursue other rights and remedies that the law or this agreement provides. However, the existence of the facts on which the Department bases such findings shall be in issue and may be reviewed in proceedings under the Remedies clause of this agreement.

22.2. In the event this agreement is terminated as provided in Section 22.1, the Department may pursue the same remedies against UHL as it could pursue in the event of a breach of the agreement by UHL, and as a penalty, in addition to any other damages to which it may be entitled by law, be entitled to exemplary damages in an amount (as determined by the Department) which shall be not less than three nor more than ten times the costs UHL incurs in providing any such gratuities to any such officer or employee.

Section 23.0 Responsibility of the Agreement

23.1 UHL is responsible for the professional quality, technical accuracy, timely completion and coordination of all designs, drawings, specifications, reports and other services furnished by UHL under this agreement. If the agreement involves environmental measurements or data generation, UHL shall comply with EPA quality assurance requirements contained in 40 CFR 31.45. UHL shall, without additional compensation, correct or revise any errors, omissions or other deficiencies in designs, drawings, specifications, reports and other services.

23.2 UHL shall perform the professional services necessary to accomplish the work specified in this agreement in accordance with this agreement and applicable EPA requirements in effect on the date of execution of the assistance agreement for this project.

23.3 The Department's or EPA's approval of drawings, designs, specifications, reports and incidental work or materials furnished thereunder shall not in any way relieve UHL of responsibility for the technical adequacy of work. Neither the Department's nor EPA's review, approval, acceptance or payment for any of the services shall be construed as waiver of any rights under this agreement or of any cause for action arising out of the performance of this agreement.

23.4 UHL shall be, and shall remain, liable in accordance with Iowa Code Chapter 669 (1999) for all damages to the Department or EPA caused by UHL's negligent performance of any of the services furnished under this agreement, except for errors, omissions or other deficiencies to the extent attributable to Department-furnished data and any third party. UHL shall not be responsible for any time delays in the project caused by circumstances beyond UHL's control.

23.5 UHL's obligations under this clause are in addition to UHL's other express or implied assurances under this agreement or state law and in no way diminish any other rights that the Department may have against UHL for faulty materials, equipment or work.

Section 24.0 Final Payment

Before final payment or a termination settlement under this agreement, UHL shall execute and deliver to the Department a release of all claims against the Department arising under, or by virtue of, this agreement except claims which are specifically exempted by UHL. Unless otherwise provided in this agreement, by state law or otherwise expressly agreed to by the parties to the agreement, final payment under a settlement upon termination of this agreement shall not constitute a waiver of the Department's claims against UHL or his sureties under this agreement or applicable performance and payment bonds.

Section 25.0 Violating Facilities

UHL shall comply with all applicable standards, orders or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857(h)), Section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and EPA regulations (40 CFR Part 15) which prohibit the use, under nonexempt Federal contracts, grants or loans in excess of \$100,000, of facilities included on the EPA List of Violating Facilities.

Section 26.0 Energy Efficiency

UHL shall comply with mandatory standards and policies on energy efficiency contained in the state's energy conservation plan issued in compliance with the Energy Policy and Conservation Act (P.L. 94-163).

Section 27.0 Compliance with Laws

UHL agrees that over the duration of and as a condition of UHL's duty to perform under the terms of this agreement, that it will be in compliance with all applicable laws and regulations of the state and Federal government, including, but not limited to Equal Employment Opportunity provisions, Occupational Health and Safety Act, records retention, audit requirements, allowable costs, and 40 CFR.

UHL certifies that it is not on EPA's List of Violating Facilities as listed in 40 CFR Part 15 and that it has not been debarred, suspended, or otherwise excluded from receiving federal funds by any agency of the U.S. government.

Section 28.0 Covenant Against Contingent Fees

UHL assures that no person or selling agency has been employed or retained to solicit this agreement upon an agreement or understanding for a commission, percentage, brokerage or contingent fee excepting bona fide employees or bona fide established commercial or selling agencies maintained by UHL for the purpose of securing business. For breach of violation of this assurance, the Department shall have the right to annul this agreement without liability or, at its discretion, to deduct from the agreement price or consideration, or otherwise recover the full amount of such commission, percentage, brokerage or contingent fee.

Section 29.0 Changes

29.1. The Department may at any time, by written order make changes within the general scope of this agreement in the services or work to be performed. If such changes cause an increase or decrease in UHL's cost or time required to perform any services under this agreement, whether or not changed by any order, the Department shall make an equitable adjustment and modify this agreement in writing. UHL must assert any claim for adjustment under this clause in writing within 30 days from the date it receives the Department's proposed change, unless the Department grants additional time before the date of final payment.

29.2. No services for which UHL will charge an additional compensation shall be furnished without the written authorization of the Department.

Section 30.0 Debarment and Suspension

30.1. UHL hereby certifies that to the best of its knowledge and belief that it and its participants are not presently, debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any federal department or agency.

30.2. UHL acknowledges that doing business with any party appearing on the non-procurement portion of the "List of Parties Excluded from Federal Programs" may result in disallowance of costs under this agreement and may also result in suspension or debarment.

Section 31.0 Minority and Women's Business Utilization

31.1. UHL agrees to include the six affirmative steps in 40CFR31.36(e) in any solicitation documents for subcontracting services under the agreement to assure that minority and women's businesses are used when possible. UHL will submit Standard Form 334 to this department to report the utilization of such businesses.

Section 32.0 Publication Agreements

32.1 UHL or the Department shall place one of the following statements as applicable on the cover page of all non-financial publications prepared under this agreement.

- "The publication of this document has been funded by the Iowa Department of Natural Resources through a grant from the U.S. Environmental Protection Agency."
- "The publication of this document has been funded by the University Hygienic Laboratory, and, by the Iowa Department of Natural Resources through a grant from the U.S. Environmental Protection Agency."
- "The publication of this document has been funded by the University Hygienic Laboratory, Iowa City, Iowa."

32.2 UHL shall submit to the Department an unbound copy of any UHL publication prepared under this agreement.

32.3 The Department shall provide public records for examination and technical staff for personal interview by UHL or UHL's agent at the Department's Air Quality Bureau office (7900 Hickman Road, Urbandale, Iowa). UHL shall hold all information provided by the Department as confidential.

32.4 All information generated pursuant to this Agreement shall become the property of the State of Iowa.

32.5 The Department shall review and comment on all products and subsequent revisions of these products submitted by UHL within the time period specified in Article III. Failure to comply within the allotted time constitutes approval by the Department.

APPENDIX AQ1: EXISTING AMBIENT AIR MONITORING NETWORK (6/06)

AIRS AQS Site ID			Site Description	Parameter(s)
19	033	0018	Mason City – 17 th & Washington	PM10 (2025, co-located), PM10 TEOM (backup), PM10 FDMS, SO2, MET**
19	033	0020	Mason City-Washington School	PM10 (2025)
19	045	0019	Clinton-Chancy Park Tennis Court	PM10 (2025), SO2, MET
19	045	0021	Clinton-Rainbow Park	PM2.5 (2025), PM2.5 FDMS, Ozone (co-located), MET**
19	055	0001	Dundee-Backbone State Park	PM10 (2025)
19	065	0003	West Union-CAFO	H2S, NH3 (co-located), MET
19	079	0008	Stanhope-CAFO	H2S, NH3 (co-located), MET
19	079	0009	Jewell-CAFO	H2S, NH3 (co-located), MET
19	081	0008	Kanawha-CAFO	H2S, NH3 (co-located), MET
19	083	0004	Iowa Falls-CAFO	H2S, NH3 (co-located), MET
19	085	1101	Harrison County-Pisgah	Ozone, MET
19	103	2001	Iowa City-Hoover School	PM2.5 (2025)
19	111	0008	Keokuk Fire Station	PM10 (2025)
19	137	0002	Viking Lake State Park	PM2.5 (2025), PM2.5 & 10 FDMS, Ozone, NH3, MET**, IMPROVE
19	139	0015	Muscatine-Garfield School	PM 2.5 (2025), PM10 (2025, co-located)
19	139	0016	Muscatine-Greenwood Cemetery	SO2, MET
19	139	0017	Muscatine-Muscatine Power and Water	SO2, MET
19	139	0020	Muscatine-Musser Park	SO2, MET
19	147	1002	Emmetsburg-Iowa Lakes Community College	PM2.5(2025), PM10 (2025), PM2.5 & 10 FDMS, Ozone, MET**
19	155	0009	Council Bluffs-Franklin School	PM2.5 (2025, co-located), PM10 (2025)
19	161	0005	Sac City-CAFO	H2S, NH3 (co-located), MET
19	163	0014	Scott County Park	Ozone (co-located), MET
19	163	0015	Davenport-10 th and Vine	PM2.5 (2025, co-located), PM10 (2025), PM2.5 & PM10 FDMS, Speciation, Ozone, NO2, SO2-T, Continuous Particulate NO3 and SO4, Toxics, MET**
19	163	0017	Buffalo-Linwood Mining	PM10 FDMS, PM10, PM10 TEOM (backup), MET
19	163	0018	Davenport-Adams Elementary	PM2.5 (2025), PM10 (2025)

19	163	0019	Davenport-Black Hawk Foundry	PM2.5 (2025), PM10 (2025), PM10 FDMS, PM10 TEOM (backup), MET**
19	167	0004	Newkirk-CAFO	H2S, NH3, MET
19	177	0006	Lake Sugema	SO2, PM2.5 (2025), PM 2.5 & PM10 FDMS, Ozone, IMPROVE, Nephelometer, MET**
19	193	0017	Sioux City- Lowell School	PM2.5 (2025), PM10 (2025, co-located)
19	197	0004	Wright Co.- Clarion	PM2.5 (2025), H2S, NH3 (co-located), MET
19	197	0006	Wright Co.- Goldfield	H2S, NH3 (co-located), MET
19	197	0007	Wright Co.- Belmond	H2S, NH3 (co-located), MET

MET indicates wind speed and direction, as well as ambient temperature, pressure, and relative humidity, MET indicates wind speed and direction only**

APPENDIX AQ2: AMBIENT AIR MONITORING NETWORK MODIFICATIONS

New Monitors at Existing Sites:

Continuous Particulate Nitrate at 10th and Vine, October 1-April 30
Trace-level CO at 10th and Vine, October 1
Ion sampling and analysis 10th and Vine, 1:3, October 1
Install PM10 (2025) samplers at Lake Sugema and Viking Lake, 1:3, January 1